



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/596,966

06/30/2006

Hideo Sato

09792909-6649

3198

26263

7590

07/20/2009

SONNENSCHN NATH & ROSENTHAL LLP

P.O. BOX 061080

WACKER DRIVE STATION, WILLIS TOWER

CHICAGO, IL 60606-1080

EXAMINER

PHAM, QUANG

ART UNIT

PAPER NUMBER

4192

MAIL DATE

DELIVERY MODE

07/20/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/596,966	Applicant(s) SATO, HIDEO	
	Examiner QUANG PHAM	Art Unit 4192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06/30/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/30/2006, 04/14/2008, 07/08/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

In this instant application, claims 1-12 have been examined and considered.

Specification

1. The abstract of the disclosure is objected to because the abstract has been more than 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. **Claim 8 is rejected under 35 U.S.C. 112 first paragraph as written description of the invention.**

4. Regarding **claim 8**, the term *divisional units of data* and the technique *restarts obtaining the divisional units of the data from the divisional unit which can not be obtained* were not provided or described in a fully concise manner. Appropriate correction is required. For the purpose of examination, the examiner assumes that the process of obtaining the blood vessel image will be restarted when the blood vessel image is not successfully obtained.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1- 6 and 8 are rejected under 35 U.S.C. 102(b) as anticipated by Kono et al. (US Patent 6,813,010 B2).**

7. Regarding **claim 1**, Kono et al. disclosed a personal identification system with function to capture an image of a vein pattern of a finger and perform an authentication by comparing the image captured with the registered image. Further, Kono et al. discloses *an information processing system comprising first and second information processing apparatuses, wherein:*

the first information processing apparatus includes:

storage means which stores an identification target at a

predetermined portion of a living body, as biological

identification data (column 7 line 62 – column 8 line 5; a user

provides his/her ID to obtain his/her registered image stored in

the database using non contact IC card, and FIG. 11 step

1002; the user's input); and

first communication means which is brought close to a

predetermined position, held by the living body, and performs

communication kept close at the predetermined position

(column 7 line 62 – column 8 line 5, column 5 lines 22-38; the authentication process begins when the user ID received, and FIG. 11 step 1003; the system obtains image from the database with provided user ID), *and*

the second information processing apparatus includes:

a biological sensor which detects the living body kept close to the position, as biological data (column 3 line 67 – column 4 line 10; the personal identification system starts working when the sensor detects user finger, FIG. 6; the user finger image captured processing, column 2 line 68 – column 3 line 21; the biological sensor in the second information processing apparatus, and FIG. 9A-C; the biological sensor, and column 3 lines 37-40);

second communication means which communicates with the first communication means held by the living body kept close to the predetermined position (column 3 line 67 – column 4 line 10, FIG. 6, column 7 line 62 – column 8 line 5, column 5 lines 22-38; the authentication process begins when the user ID received, and FIG. 11 steps 1002-1003);

extraction means which extracts biological data corresponding to the predetermined portion, from the biological data detected by the biological sensor (column 2 line 68 – column 3 line 21 and FIG. 11 steps 1004-1103); *and*

biological authentication means which performs biological authentication, based on the biological data corresponding to the predetermined portion and extracted by the extraction means, and on the biological identification data obtained from the first information processing apparatus via the first and second communication means (column 4 line 58 – column 6 line 31; the authentication process, and FIG. 11 steps 1105, 1007-1010).

8. Regarding **claim 2**, Kono et al. discloses everything as claimed. Further, claim 2 discloses the information processing apparatus that is inherent variations of claim 1. Therefore, claim 2 is interpreted and thus rejected for the reasons set forth above in the rejection of claim 1.

9. Regarding **claim 3**, Kono et al. discloses everything as applied above (see claim 2). Further, Kono et al. discloses:

network communication means which communicates with a management server managing the communication target, via a predetermined network (column 5 lines 14-38; the second information processing apparatus captures the user finger and stores the image to the network database for performing the authentication, and FIG. 11 steps 1000, 1101-1103, and 100); and

relay means which relays mutual authentication between the communication target and the management server via the

Art Unit: 4192

network communication means and the near-distance communication means, wherein in accordance with a result of the mutual authentication, comparison is performed by the biological authentication means, or in accordance with a comparison result by the biological authentication means, the mutual authentication is relayed by the relay means (column 5 lines 14-41; the authentication process, and FIG. 11 steps 1002-1004, 1007-1010, and 1101-11050).

10. Regarding **claim 4**, Kono et al. discloses everything as applied above (see claim 2). Further, Kono et al. discloses *the network communication means which communicates with a management server which manages the biological identification data registered in the communication target (column 5 lines 14 – 17, column 5 lines 22 – 27, and FIG. 11 steps 1000, 1101-1103, and 100), establishing a correspondence thereof, wherein the biological authentication means compares mutually one another of the biological data at the predetermined portion (column 5 lines 27 – 31 and FIG. 11 steps 1003 and 100), extracted by the extraction means, the biological identification data obtained from the management server via the network communication means, and the biological identification data obtained from the communication target via the near-distance communication means (column 5 lines 57-62 and FIG. 11 steps 1101-1103).*

11. Regarding **claim 5**, Kono et al. discloses everything as applied above (see claim 2). Further, Kono et al. discloses *network communication means which*

Art Unit: 4192

communicates with a management server via a predetermined network, the management server managing the biological identification data registered in the communication target and compressed data by use of data obtained in a process up to generation of the biological identification data, with a correspondence established between the biological identification data and a compressed data, wherein:

the extraction means generates the compressed data by use of data obtained in a process up to exaction of the biological data at the predetermined portion from the biological data detected by the biological sensor (column 4 line 51 – column 6 line 31 and FIG. 11); and

the biological authentication means compares the compressed data generated by the extraction means with the compressed data obtained from the management server via the network communication means (column 4 line 51 – column 6 line 31 and FIG. 11).

12. Regarding **claim 6**, Kono et al. discloses everything as claimed. Further, claim 6 discloses the information processing apparatus that is inherent variations of claim 5. Therefore, claim 6 is interpreted and thus rejected for the reasons set forth above in the rejection of claim 5.

13. Regarding **claim 8**, Kono et al. discloses everything as applied above (see claim 2). Further, Kono et al. discloses *the information processing apparatus wherein:*

Art Unit: 4192

the biological identification data each are divided into predetermined divisional units of data (column 6 line 36 – column 7 line 52 and FIG. 12A-G),

every time one of the divisional units of data is obtained, the biological authentication means performs biological authentication with a corresponding data part of the biological data at the predetermined portion, and if any of the divisional units of data cannot be obtained, the biological authentication means restarts obtaining of the divisional units of the data from the divisional unit which cannot be obtained (column 7 lines 52-61).

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

15. **Claim 9 is rejected under 35 U.S.C. 102(e) as being anticipated by Endoh et al. (US 2004/0022421 A1).**

Art Unit: 4192

16. Regarding **claim 9**, Endoh et al. discloses the processor with personal verification function and operating device. Further, Endoh et al. discloses *an information processing apparatus comprising:*

equipment means which is equipped on a predetermined portion of a living body;

storage means which stores an identification target at the predetermined portion of the living body, as biological

identification data ([0216] and FIG. 1 element 3); and

communication means which is held by the equipment means and transmits the biological identification data to the communication target to which the predetermined portion equipped with the equipment means is brought close, wherein by the communication target, the living body which has been brought close with the equipment means equipped is detected as biological data ([0202] - [0213], [0215]-[0218] and FIG. 1).

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. **Claim 7 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Kono et al. in view of Dietz et al. (USPG Pub 2004/0208632 A1) and further in view of Endoh et al. (USPG Pub 2004/0022421).**

19. Regarding **claim 7**, Kono et al. discloses everything as applied above (see claim 2); however, Kono et al. fails to disclose *the communication target held by the living body is provided with a light source, the information processing apparatus further comprising: generation means which generates a flicker pattern to control a flickering state of the light source, and encryption means which encrypts the flicker pattern generated by the generation means, and the biological authentication means compares the flicker pattern with a luminance pattern of the biological data, which is detected by the biological sensor through the living body brought close to the predetermined position and emitted with light flickered in accordance with the flicker pattern from the light source in the communication target brought close to the predetermined position.* The examiner maintains that it was well known in the art at the time the invention was made to provide *the communication target held by the living body is provided with a light source, the information processing apparatus further comprising: generation means which generates a flicker pattern to control a flickering state of the light source, and encryption means which encrypts the flicker pattern generated by the generation means, and the biological authentication means compares the flicker pattern with a luminance pattern of the biological data, which is detected by the biological sensor through the living body brought close to the predetermined position and emitted with light flickered in accordance with the*

Art Unit: 4192

flicker pattern from the light source in the communication target brought close to the predetermined position, as taught by Endoh et al. and Dietz et al., respectively.

Regarding *the communication target held by the living body is provided with a light source*, Endoh et al. discloses a device with built-in LEDs used as the light source to capture the user blood vessel image in the authentication process ([0202] - [0213], [0215]-[0218] and FIG. 1). Which is equivalent to *the communication target held by the living body is provided with a light source*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Kono et al. by specifically providing *the communication target held by the living body is provided with a light source*, as taught by Endoh et al., for the purpose of improve the accuracy of the personal veification.

Regarding *the information processing apparatus further comprising: generation means which generates a flicker pattern to control a flickering state of the light source, and encryption means which encrypts the flicker pattern generated by the generation means, and the biological authentication means compares the flicker pattern with a luminance pattern of the biological data, which is detected by the biological sensor through the living body brought close to the predetermined position and emitted with light flickered in accordance with the flicker pattern from the light source in the communication target brought close to the predetermined position*, Dietz et al. discloses the communication using bi-directional LEDs. Further Dietz et al. discloses the LEDs function as a light

Art Unit: 4192

detector which is able to transmit and receive light in communication ([0041]-[0054]). Which is equivalent to *the information processing apparatus further comprising: generation means which generates a flicker pattern to control a flickering state of the light source, and encryption means which encrypts the flicker pattern generated by the generation means, and the biological authentication means compares the flicker pattern with a luminance pattern of the biological data, which is detected by the biological sensor through the living body brought close to the predetermined position and emitted with light flickered in accordance with the flicker pattern from the light source in the communication target brought close to the predetermined position,*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kono et al. by specifically providing *the information processing apparatus further comprising: generation means which generates a flicker pattern to control a flickering state of the light source, and encryption means which encrypts the flicker pattern generated by the generation means, and the biological authentication means compares the flicker pattern with a luminance pattern of the biological data, which is detected by the biological sensor through the living body brought close to the predetermined position and emitted with light flickered in accordance with the flicker pattern from the light source in the communication target brought close to the predetermined position, as taught by Dietz et al., for the purpose of improving the uses of modern electrical application.*

20. **Claim 10 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Endo et al. in view of Wakabayashi (USPG Pub 2003/0178483 A1).**

21. Regarding **claim 10**, Endo et al. discloses everything as applied above (see claim 9); however, Endo et al. fails to disclose *the information processing apparatus further comprising voltage accumulation means which accumulates a voltage induced in response to reception of a signal supplied from the communication target, wherein the communication means transmits the biological identification data to the communication target, using the voltage accumulated by the voltage accumulation means as an electromotive force*. The examiner maintains that it was well known in the art at the time the invention was made to provide the *voltage accumulation means which accumulates a voltage induced in response to reception of a signal supplied from the communication target, wherein the communication means transmits the biological identification data to the communication target, using the voltage accumulated by the voltage accumulation means as an electromotive force*, as taught by Wakabayashi.

22. In a similar field of endeavor, Wakabayashi discloses the non-contact communication medium and non-contact communication system. Further, Wakabayashi discloses the non-contact IC card which receives the electromagnetic wave to generate the DC voltage to exchange the information stored in the non-contact IC card ([0065] – [0066]). Which is equivalent to *voltage accumulation means which accumulates a voltage induced in response to reception of a signal supplied from the communication target, wherein the communication means transmits the biological identification data to the*

Art Unit: 4192

communication target, using the voltage accumulated by the voltage accumulation means as an electromotive force.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Endoh et al. by specifically providing the *voltage accumulation means which accumulates a voltage induced in response to reception of a signal supplied from the communication target, wherein the communication means transmits the biological identification data to the communication target, using the voltage accumulated by the voltage accumulation means as an electromotive force*, as taught by Wakabayashi for the purpose of improving the convenience of using the non-contact communication in many different applications.

23. Claim 11 is rejected under 35 U.S.C 103(a) as being unpatentable over Endo et al. in view of Lemelson (US Patent 4,189,712).

24. Regarding **claim 11**, Endoh et al. discloses everything as applied above (see claim 9); however, Endoh et al. fails to disclose *the apparatus wherein, the equipment is constituted by a circular ring portion, and a light source which is provided on the ring portion and emits imaging light on the identification target at the predetermined portion, and the imaging light is guided to an imaging element provided the communication target, through the living body brought close to the communication target*. The examiner maintains that it was well known in the art at the time the invention was made to provide *the equipment is constituted by a circular ring portion, and a light source which is provided on the ring portion and emits imaging light on the identification target at the predetermined portion, and*

Art Unit: 4192

the imaging light is guided to an imaging element provided the communication target, through the living body brought close to the communication target, as taught by Lemelson.

25. In a similar field of endeavor, Lemelson discloses a switch and lock activating system and method. Further, Lemelson discloses the finger ring that contains the security code to operate the activating system (column 3 lines 23-40, column 4 lines 33-68, and column 5 lines 29-68). Which is equivalent to *the equipment is constituted by a circular ring portion, and a light source which is provided on the ring portion and emits imaging light on the identification target at the predetermined portion, and the imaging light is guided to an imaging element provided the communication target, through the living body brought close to the communication target.*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Endoh et al. by specifically providing *the equipment is constituted by a circular ring portion, and a light source which is provided on the ring portion and emits imaging light on the identification target at the predetermined portion, and the imaging light is guided to an imaging element provided the communication target, through the living body brought close to the communication target, as taught by Lemelson for the purpose of improving security and convenience to operate the activating system.*

26. **Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endoh et al. in view of Dietz et al. (USPG Pub 2004/0208632 A1).**

Art Unit: 4192

27. Regarding **claim 12**, Endoh et al. discloses everything as applied above (see claim 9); however, Endoh et al. fails to disclose the information processing apparatus wherein *the imaging light is emitted, flickered in accordance with a flicker pattern supplied from the communication target; the flicker pattern is compared with a luminance pattern of images sequentially generated on the basis of the imaging light*. The examiner maintains that it was well known in the art at the time the invention was made to provide *the imaging light is emitted, flickered in accordance with a flicker pattern supplied from the communication target; the flicker pattern is compared with a luminance pattern of images sequentially generated on the basis of the imaging light*, as taught by Dietz et al.

28. In a similar field of endeavor, Dietz et al. discloses the communication using bi-directional LEDs. Further, Dietz et al. discloses the LEDs function as a light detector which is able to transmit and receive light in communication ([0041]-[0054]). Which is equivalent to *the imaging light is emitted, flickered in accordance with a flicker pattern supplied from the communication target; the flicker pattern is compared with a luminance pattern of images sequentially generated on the basis of the imaging light*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Endoh et al. by specifically providing *the imaging light is emitted, flickered in accordance with a flicker pattern supplied from the communication target; the flicker pattern is compared with a luminance pattern of images sequentially generated on the basis of the imaging light*, as

Art Unit: 4192

taught by Dietz et al., for the purpose of improving the uses of modern electrical application.

Citation of Pertinent Art

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Endol et al., USPG Pub 2005/0148876 A1, the system and method to identify and authenticate personnel using biometric data.

b. Kono et al., USPG Pub 2004/0120556 A1, which discloses the method and system to obtain the personal identification and perform the authentication based on the registered identification and the personal identification.

c. Kuffner et al., USPG Pub 2004/0179588 A1, which discloses the method and apparatus for processing device identification to improve security in communication system.

d. Piosenka et al., US Patent 4,993,068, which discloses the method and system to obtain the personal identification and perform the authentication based on the registered identification and the personal identification.

e. Benhammou et al., USPG Pub 2004/0059925, which discloses the bi-directional communication and authentication between the device and host.

f. Kinsella, USPG Pub 2002/0150282, which discloses the method and system to obtain the fingerprint identification and perform the

authentication based on the registered fingerprint identification and the fingerprint identification.

g. Nagasaka et al., USPG Pub 2002/0184641 A1, which discloses the method and system to obtain the blood vessel identification and perform the authentication based on the registered blood vessel identification and the blood vessel identification.

h. Nagasaka et al., USPG Pub 2003/0037264 A1, which discloses the method and system to obtain the blood vessel identification and perform the authentication based on the registered blood vessel identification and the blood vessel identification.

i. Norris, Jr, US Patent 6,695,207 B1, which discloses the apparatus and methods for identifying and authenticating personnel using the biometric identification.

j. Hattori et al., USPG Pub 2008/0258864 A1, which discloses the bi-directional communication and authentication between the RFID tag and the interrogator.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to QUANG PHAM whose telephone number is (571)270-3668. The examiner can normally be reached on Monday - Thursday 7:30-5:00.

Art Unit: 4192

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Harold can be reached on 571-272-7519. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/QUANG PHAM/
Examiner, Art Unit 4192
/Jefferey F Harold/
Supervisory Patent Examiner, Art Unit 4192